Deep Bio’s AI Algorithm Demonstrates Significant Prognostic Advancements in Prostate Cancer Study

– AI-derived tumor volume metrics enhance prognostic prediction over traditional pathology methods

SEOUL, SOUTH KOREA, April 8, 2025 /EINPresswire.com/ -- Deep Bio, a leader in AI-powered digital pathology, announced the publication of a groundbreaking study in Scientific Reports, an open-access journal from the Nature Publishing Group. Conducted in collaboration with Pusan National University College of Medicine, the study confirms the clinical value of Deep Bio’s AI algorithm in analyzing radical prostatectomy specimens at an unprecedented scale.

The study involved 992 prostate cancer patients and 29,646 digitized whole-slide images (WSIs) from radical prostatectomy specimens. It assessed the clinical feasibility and prognostic value of Deep Bio’s deep learning-based image analysis (DLIA) algorithm, DeepDx Prostate RP (Radical Prostatectomy). The algorithm demonstrated strong concordance with pathologists for Gleason grading. It outperformed manual assessments in tumor volume (TV) and percent tumor volume (PTV) measurements in predicting biochemical progression-free survival (BPFS).

Notably, when AI-derived PTV was incorporated into the CAPRA-S prognostic model, the predictive accuracy for recurrence was significantly improved (c-index increase, p=0.006). These findings highlight the algorithm’s potential to support clinical decision-making in prostate cancer management by offering consistent, quantitative insights.

“These findings validate our AI model’s ability to analyze prostate cancer at scale while improving prognostic accuracy,” said Sun Woo Kim, CEO of Deep Bio. “By integrating AI into digital pathology workflows, we are enabling more precise, data-driven decision-making that can lead to improved patient outcomes.”

This publication follows Deep Bio’s previous external validation study with Stanford University, published in BJU International, further establishing the global credibility of its AI-driven

pathology solutions. The findings reinforce the role of AI in enhancing cancer diagnostics and prognosis prediction, paving the way for more widespread adoption of digital pathology tools in clinical practice.

About Deep Bio

Founded in 2015, Deep Bio Inc. develops AI-powered solutions for cancer pathology diagnostics, utilizing advanced deep learning technologies to enhance diagnostic precision and pathologist efficiency. The company specializes in in-vitro diagnostic medical device software (IVD SaMD) that integrates data-driven insights to support clinical decision-making.

Deep Bio’s flagship AI solution, DeepDx Prostate, marked with European CE-IVD, processes Whole Slide Images (WSI) to accurately identify and segment cancerous lesions. The software provides comprehensive classification by Gleason pattern, precise tumor localization, and critical metrics such as Gleason score quantification and tumor volume assessment, which are essential for diagnosis, prognosis, and treatment planning.

This AI technology enables detailed analysis and reporting, supporting healthcare professionals with precise diagnostic insights. In 2024, Deep Bio was recognized for its innovation with the CES Innovation Award. The company remains committed to transforming pathology workflows and improving patient outcomes worldwide.

Diane Kim
Deep Bio
diane.kim@deepbio.co.kr
